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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,909

12/10/2003

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4740-231

5796

24112 7590 05/13/2008

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EXAMINER

VUONG, QUOCHIEN B

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,909	Applicant(s) HOSEIN ET AL.	
	Examiner Quochien B. Vuong	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/10/04, 12/03/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 05/10/2004 and 12/03/2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner. However, some of the references did not have the date and were crossed out.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 31-35, 38-446, and 49-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Chih-Lin et al. (EP 0767548 A).

Regarding claim 31, Chih-Lin et al. disclose a method of reverse link rate control at a wireless communication network base station comprising: determining an achievable data rate for each of a plurality of mobile stations based on a reverse link path loss of the mobile station and a maximum transmit power of the mobile station; calculating a priority value for each mobile station based on the achievable rate determined for the mobile station; and generating reverse link data rate control decisions for one or more of the plurality of mobile stations based on their

corresponding priority values (column 1, lines 5-8; column 9, lines 8-29; and column 11, line 44 – column 12, line 50).

As to claims 32 and 33, Chih-Lin et al. disclose receiving maximum transmit power information from one or more of the mobile stations and using a default maximum power value as the maximum transmit power of one or more of the mobile stations (column 12, lines 1-50).

As to claim 34 and 35, Chih-Lin et al. disclose wherein determining an achievable data rate for each of a plurality of mobile stations based on a reverse link path loss of the mobile station and a maximum transmit power of the mobile station comprises calculating the achievable rate according to Shannon's Capacity Theorem based on a SINR that could be achieved by the mobile station given its maximum transmit power and its reverse link path loss and maintaining an estimate of total interference plus noise at the base station to be used in determining the SINR for the mobile station (column 12, lines 1-50).

As to claims 38-40, Chih-Lin et al. disclose determining the reverse link path loss for each mobile station based on an indication of received forward link power at the mobile station and knowledge of corresponding transmitted forward link power at the base station, wherein determining the reverse link path loss for each mobile station based on an indication of received forward link power at the mobile station and knowledge of corresponding transmitted forward link power at the base station comprises: receiving reports of received forward link power from the mobile station; and tracking forward link transmit power used to transmit to the mobile station, and wherein

receiving reports of received forward link power from the mobile station comprises periodically receiving a report of average forward link traffic channel at the mobile station, and wherein tracking forward link transmit power used to transmit to the mobile station comprises maintaining an average of forward link traffic channel transmit power at the base station (column 12, lines 1-50).

As to claims 41 and 42, Chih-Lin et al. disclose wherein generating reverse link data rate control decisions for one or more of the plurality of mobile stations based on their corresponding priority values comprises ranking the mobile stations according to their achievable rates, and selecting one or more of the mobile stations in rank order for scheduled use of the reverse link in a next scheduling interval, and limiting the number of mobile stations selected based on a reverse link target loading (column 12, lines 1-50).

As to claim 43, Chih-Lin et al. disclose wherein generating reverse link data rate control decisions for one or more of the plurality of mobile stations based on their corresponding priority values comprises ranking the mobile stations according to their achievable rates, selecting one or more of the mobile stations in rank order, and granting reverse link rate increases to the selected mobile stations (column 12, lines 1-50).

Regarding claim 44, Chih-Lin et al. disclose a base station for use in a wireless communication network comprising: transceiver circuits to send signals to a plurality of mobile stations on a forward link and to receive signals from the mobile stations on a reverse link; processing logic to control the transceiver circuits, said processing logic

including a rate control circuit configured to generate reverse link rate control decisions for the mobile stations by: determining an achievable data rate for each of a plurality of mobile stations based on a reverse link path loss of the mobile station and a maximum transmit power of the mobile station; calculating a priority value for each mobile station based on the achievable rate determined for the mobile station; and generating reverse link data rate control decisions for one or more of the plurality of mobile stations based on their corresponding priority values (column 1, lines 5-8; column 9, lines 8-29; and column 11, line 44 – column 12, line 50).

As to claims 45 and 46, Chih-Lin et al. disclose wherein the rate control circuit is configured to determine an achievable data rate for each of a plurality of mobile stations based on a reverse link path loss of the mobile station and a maximum transmit power of the mobile station by calculating the achievable rate according to Shannon's Capacity Theorem based on a SINR that could be achieved by the mobile station given its maximum transmit power and its reverse link path loss, wherein the rate control circuit is configured to maintain an estimate of total interference plus noise at the base station to be used in determining the SINR for the mobile station (column 12, lines 1-50).

As to claims 49-51, Chih-Lin et al disclose wherein the rate control circuit is configured to determine the reverse link path loss for each mobile station based on an indication of received forward link power at the mobile station and knowledge of corresponding transmitted forward link power at the base station, wherein the rate control circuit is configured to determine the reverse link path loss for each mobile

station based on an indication of received forward link power at the mobile station and knowledge of corresponding transmitted forward link power at the base station by: receiving reports of received forward link power from the mobile station; and tracking forward link transmit power used to transmit to the mobile station, and wherein the rate control circuit is configured to periodically receive a report of average forward link traffic channel at the mobile station, and track forward link transmit power used to transmit to the mobile station by maintaining an average of forward link traffic channel transmit power at the base station (column 12, lines 1-50).

As to claims 52 and 53, Chih-Lin et al. disclose wherein the rate control circuit is configured to generate reverse link data rate control decisions for one or more of the plurality of mobile stations based on their corresponding priority values by ranking the mobile stations according to their achievable rates, and selecting one or more of the mobile stations in rank order for scheduled use of the reverse link in a next scheduling interval, and wherein the rate control circuit is configured to limit the number of mobile stations selected based on a reverse link target loading (column 12, lines 1-50).

As to claim 54, Chih-Lin et al. disclose wherein the rate control circuit is configured to generate reverse link data rate control decisions for one or more of the plurality of mobile stations based on their corresponding priority values by ranking the mobile stations according to their achievable rates, selecting one or more of the mobile stations in rank order, and granting reverse link rate increases to the selected mobile stations (column 12, lines 1-50).

Regarding claim 55, Chih-Lin et al. disclose a mobile station comprising:
a transceiver circuit to send signals to and receive signals from a wireless communication network base station; and one or more processing circuits to process the signals sent and received via the transceiver circuit, said one or more processing circuits comprising a rate control support circuit configured to track received forward link signal power and to generate corresponding power reports for transmission to the base station (column 1, lines 5-8; column 9, lines 8-29; and column 11, line 44 – column 12, line 50).

As to claim 56, Chih-Lin et al. disclose wherein the rate control circuit is configured to transmit a power report on a per frame basis, wherein the mobile station transmits a power report per reverse link transmit frame (column 12, lines 1-50).

As to claim 57, Chih-Lin et al. disclose wherein the rate control circuit is configured to track received forward link signal power based on maintaining a filtered estimate of received traffic channel power (column 12, lines 1-50).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5 Claims 1-57 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-56 of copending Application No. 10/713,763. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications recite the same teaching of reverse link rate control at a base station.

6. Claims 1-57 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-48 of copending Application No. 10/719,811. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications recite the same teaching of reverse link rate control at a base station.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quochien B Vuong/
Primary Examiner, Art Unit 2618